

Title (en)
METHOD AND APPARATUS FOR PURIFICATION OF THE AIR TO BE USED AS RAW MATERIAL IN CRYOGENIC AIR SEPARATION

Title (de)
VERFAHREN UND VORRICHTUNG ZUR REINIGUNG DER ALS AUSGANGSSTOFF BEI DER TIEFTEMPERATURZERLEGUNG VON LUFT ZU VERWENDENDEN LUFT

Title (fr)
PROCEDE ET APPAREIL DE PURIFICATION DE L'AIR DEVANT ETRE UTILISE COMME MATERIAU DE BASE DANS LA SEPARATION D'AIR CRYOGENIQUE

Publication
EP 1961477 A4 20100303 (EN)

Application
EP 06834518 A 20061212

Priority

- JP 2006324763 W 20061212
- JP 2005361073 A 20051214
- JP 2006087564 A 20060328

Abstract (en)
[origin: EP1961477A1] A purification method for feed air in cryogenic air separation of the present invention includes purifying the feed air for the cryogenic air separation by using a temperature swing adsorption method, wherein the whole region of a carbon dioxide adsorbent layer packed in an adsorption column is used as a mass transfer zone of a carbon dioxide. Also, a purification apparatus for feed air in cryogenic air separation of the present invention includes at least two adsorption columns; and a moisture adsorbent and a carbon dioxide adsorbent being laminated and packed in the adsorption columns, wherein the packed amount of the carbon dioxide adsorbent is the same as the amount of the carbon dioxide adsorbent in the region of the carbon dioxide adsorbent which a mass transfer zone of a carbon dioxide occupies at the end of an adsorption step, and a temperature swing adsorption method is used.

IPC 8 full level
B01D 53/04 (2006.01); **F25J 3/08** (2006.01)

CPC (source: EP KR US)
B01D 53/04 (2013.01 - KR); **B01D 53/0462** (2013.01 - EP US); **F25J 3/04169** (2013.01 - EP US); **F25J 3/08** (2013.01 - KR); **B01D 2257/504** (2013.01 - EP US); **B01D 2257/80** (2013.01 - EP US); **B01D 2259/402** (2013.01 - EP US); **B01D 2259/416** (2013.01 - EP US); **B01D 2259/4508** (2013.01 - EP US); **F25J 2290/12** (2013.01 - EP US); **Y02C 20/40** (2020.08 - EP US)

Citation (search report)

- [XD] EP 0992274 A1 20000412 - AIR PROD & CHEM [US]
- [X] WO 03053546 A1 20030703 - PRAXAIR TECHNOLOGY INC [US], et al
- [A] US 4964888 A 19901023 - MILLER GEOFFREY Q [US]
- See references of WO 2007069605A1

Cited by
EP2803401A1; US9108145B2

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 1961477 A1 20080827; EP 1961477 A4 20100303; EP 1961477 B1 20141015; CN 101330962 A 20081224; CN 101330962 B 20111221; JP 4621252 B2 20110126; JP WO2007069605 A1 20090521; KR 101044402 B1 20110627; KR 20080077168 A 20080821; TW 200730236 A 20070816; TW I321489 B 20100311; US 2009282866 A1 20091119; US 9651302 B2 20170516; WO 2007069605 A1 20070621

DOCDB simple family (application)
EP 06834518 A 20061212; CN 200680046775 A 20061212; JP 2006324763 W 20061212; JP 2007518043 A 20061212; KR 20087014039 A 20061212; TW 95146583 A 20061213; US 9689406 A 20061212